

WHAT IS CLAIMED IS:

1. An apparatus for heating or cooling a fluid medium by means of environmental influences, such as light, solar irradiation, radiation, ambient temperature, etc., which comprises:

5       at least two films which are arranged parallel to each other and overlying and which to some extent adhere to each other such that at least one chamber-like cavity or interspace is formed, at least one inlet opening to the cavity or interspace for the supply of a fluid medium and at least one outlet opening to the cavity or interspace for the discharge of the fluid medium.

2. The apparatus as claimed in claim 1, wherein at least two of the chamber-like cavities or interspaces run parallel to one another and are formed between the films.

3. The apparatus as claimed in claim 2, wherein the cavities or interspaces have ends and are interconnected at their ends in order to form a single coherent chamber system;

5       at least one of the inlet openings for the supply of the fluid medium being provided in the region of one connection at one end and at least one of the outlet openings for the discharge of the fluid medium being provided in the region of the opposite connection at the other end.

4. The apparatus as claimed in claim 1, wherein one of the two films is connected to a further film, via a reinforcing, supporting layer, whereby the apparatus can simultaneously be used as a seal.

5. The apparatus as claimed in claim 4, wherein the films are connected over their entire areas.

6. The apparatus as claimed in claim 4, wherein the films are like a non-woven or a fabric.

7. The apparatus as claimed in claim 1, wherein the films forming the cavities are fabricated from a flexible polymer material, at least predominantly based on a polyolefin.

8. The apparatus as claimed in claim 7, wherein the two films are fabricated on the basis of polyethylene.

9. The apparatus as claimed in claim 8, wherein the films have one of either a fiber reinforcement or the films are at least partly chemically cross-linked.

10. An apparatus for heating or cooling a fluid medium by means of environmental influences, such as light, solar irradiation, radiation, ambient temperature, etc., which comprises:

at least two films which are arranged parallel to each other and overlying and which to some extent adhere to each other such that at least one chamber-like cavity or interspace is formed, at least one inlet opening to the cavity or interspace for the supply of a fluid medium and at least one outlet opening to the cavity or interspace for the discharge of the fluid medium, wherein one of the two films is connected to a further film, via a reinforcing, supporting layer, whereby the apparatus can simultaneously be used as a seal.

11. The apparatus as claimed in claim 10, wherein the films are connected over their entire areas.

12. The apparatus as claimed in claim 10, wherein the films are like a non-woven or a fabric.

13. The apparatus as claimed in claim 10, wherein the films forming the cavities are fabricated from a flexible polymer material, at least predominantly based on a polyolefin.

14. The apparatus as claimed in claim 10, wherein the two films are fabricated on the basis of polyethylene.

15. The apparatus as claimed in claim 14 wherein the films have one of either a fiber reinforcement or the films are at least partly chemically cross-linked.

16. The apparatus as claimed in claim 10 wherein the apparatus has a surface that faces the environment and at least the surface of the apparatus which faces the  
5 environment is colored black.

17. The apparatus as claimed in claim 10 wherein the supporting layer is comprised of a nonwoven or a fabric largely fabricated from at least one of polyester, glass or carbon fibers.

18. A method of producing an apparatus for heating or cooling a fluid medium comprising extruding at least two films extruded lying on each other by

fishtail extrusion, introducing a separating material between the two film layers in regions between the film to form chamber-like cavities.

19. The method as claimed in claim 18, wherein the separating material is a separating film, a separating nonwoven, a separating fabric or a release agent, which is introduced or sprayed.

20. The method as claimed in claim 18, wherein at least one film has embossing;

the method comprising laminating the one film to a further film, firmly joining or connecting each film to the other film at elevated points of the embossing, thereby forming cavities at depressed points of embossing.

21. The method as claimed in claim 19, wherein after extrusion of the at least two films, connecting the two films in regions not having the separating material in such a way that the two films adhere firmly to each other, the films connected to each other then being cooled down.

22. The method as claimed in claim 20, wherein after extrusion of the at least two films, connecting the two films at the elevated points of the embossing in such a way that the two films adhere firmly to each other, the films connected to each other then being cooled down.

23. The method as claimed in claim 21, further comprising, cutting the joined films to a desired length and then connecting the two end regions in the longitudinal direction to each other and providing the cavities with the supply and discharge openings.

24. The method as claimed in claim 23, wherein the end regions are connected by welding.

25. The method as claimed in claim 22, further comprising, cutting the joined films to a desired length and then connecting the two end regions in the longitudinal direction to each other and providing the cavities with the supply and discharge openings.

26. The method as claimed in claim 25, wherein the end regions are connected by welding.

27. A collector arrangement for obtaining heat and/or for air-conditioning or cooling in buildings, which comprises:

at least one apparatus as claimed in claim 4, arranged on or in the roof or on or in the facade of a building, and

5        supply and discharge lines for the fluid carrier medium and provided to flow through the apparatus.

28. A collector arrangement for obtaining heat and/or for air-conditioning or cooling in buildings, which comprises:

at least one apparatus as claimed in claim 10, arranged on or in the roof or on or in the facade of a building, and

supply and discharge lines for the fluid carrier medium and provided to flow through the apparatus.

29. A collector arrangement for obtaining heat and/or for air-conditioning or cooling in buildings, which comprises:

5           at least one apparatus as claimed in claim 17, arranged on or in the roof or on or in the facade of a building, and

          supply and discharge lines for the fluid carrier medium and provided to flow through the apparatus.